



**Dominion**

Exploration & Production, Inc.

SHL: 553' FSL & 6,694' FEL of MC-252

SHL: X = 1,197,146 ; Y = 10,423,273

BHL: 3,149' FNL & 9,748' FEL of MC-296

**Rigel**  
**MC 296, S001, ST00BP01**  
**OCS-G-21164 (BHL)**

API # 608174101801

February 25, 2005

**(PROPOSED TIEBACK SKETCH)**

Directional Well w/ KOP @ +/- 8,500'

Build to 52° @ 14,600'

Angle @ TD of 16,200' = 48°

Sea Level

ORKB - MWL: 72' (Cajun Express)

ORKB - ML: 5301'

ORKB - WH: 5289'

RKB-ML: ? (Compl rig)

RKB-WH: ? (Compl rig)

Vetco HD-H4 Profile  
FMC; UWD-15 Rigid-lock Wellhead

5,229' WD

Mudline

36", 234 ppg, X-56 @ 5,536' MD.

26", 202.25 ppg, X-56, RL4S @ 6,112' MD/TVD  
Cmt'd w/ 1482 cf, 13.8 ppg + 494 cf, 14.1 ppg to surf

11.6 ppg SBM in annulus

FMC Hanger: 17.187" ID @ 7,463' MD

20", 164.2 ppg, X-56, S60-MT to 7,906' MD / 7,906' TVD.  
Cmt'd w/ 3962 cu.ft., 14 ppg + 473 cu.ft., 14 ppg to surface

TOC @ 8,000'

16", 97 ppg, N-80HC, GB-3P-SC to 8,924' MD/ 8921' TVD.  
Cmt'd w/ 853 cu.ft., 16.4 ppg.

Tested 16" hanger to 2312 psi on 10.2 ppg

TOC @ 9,200'

11-7/8" TOL @ 9,496' MD / 9,468' TVD

13-5/8", 88.2 ppg, Q-125HC, SLSF to 9,732' MD/ 9,680' TVD  
Cmt'd w/ 444 cu.ft., 16.4 ppg

Tested 13-5/8" casing hanger to 6000 psi on 10.9 ppg

Tested 13-5/8" casing to 4600 psi on 10.9 ppg

9-7/8" TOL @ 10,980' MD / 10,663' TVD

11-7/8", 71.8 ppg, Q-125, Hyd 511 @ 11,148' MD/ 10,776' TVD  
Cemented with 258 sxs, 16.4 ppg + 745 sxs, 16.4 ppg.

Tested 11-7/8" hanger to 1630 psi on 11.4 ppg

Tested 11-7/8" casing to 1575 psi on 11.5 ppg

**Rob-E Sand (Upper)**  
11,558' - 11,580' MD /  
11,066' - 11,082' TVD  
Deviation = 44 deg incl  
BHP: 6,410 psi ( 11.1 ppge)  
BHT: 135 F

**Rob-E Sand (Lower)**  
11,640' - 11,680' MD /  
11,125' - 11,154' TVD  
Deviation = 44 deg incl  
BHP: 6,450 psi ( 11.1 ppge)  
BHT: 135 F

9-7/8", 62.8 ppg, Q-125HC, Hyd 523 @ 13,989' MD / 12,689' TVD  
Cemented with 986 sxs, 16.4 ppg.

Tested 9-7/8" hanger to 2000 psi on 12.1 ppg.

EZSV @ 11720'

Block Sqz perfs: 11728' - 11732'

**Open hole Plug: 15,200' - 16,060' MD**  
427 sxs of 16.4 ppg Class H cement

TD: 16,200' MD / 14,162' TVD